D. S. CROSBY.

CHEESE MOLD.

APPLICATION FILED DEC. 14, 1917.

1,273,334.

Patented July 23, 1918.

2 SHEETS—SHEET 1.

Fig. I.

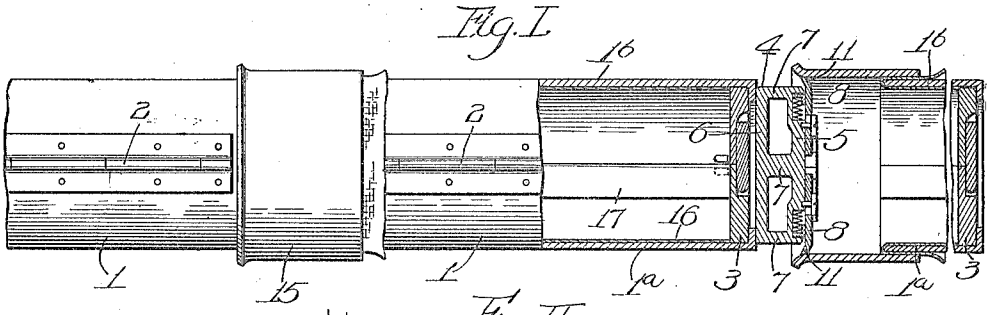


Fig. II.

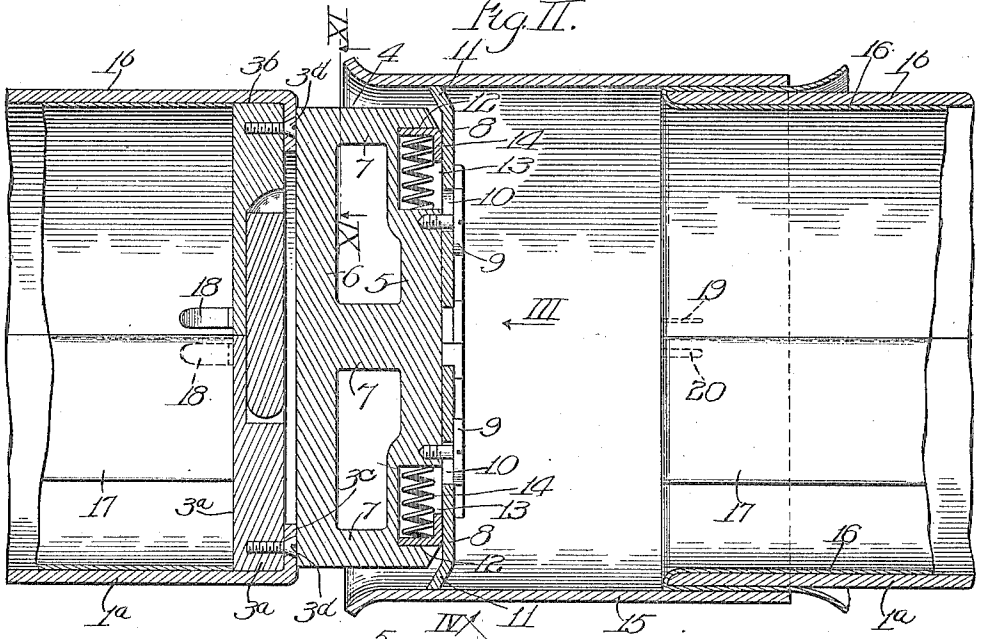
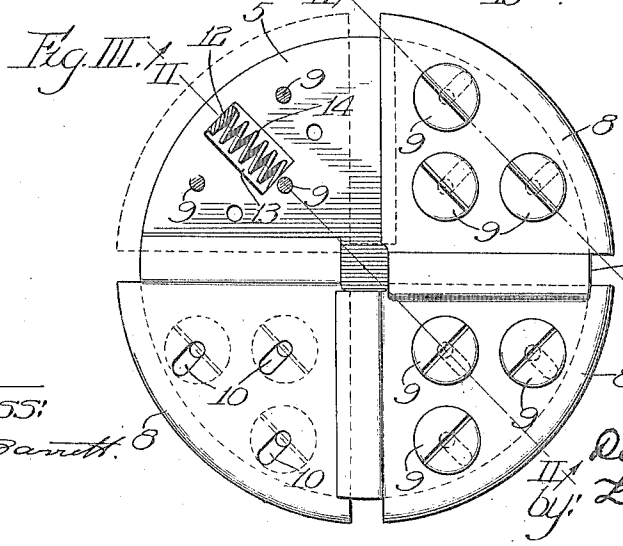


Fig. III.



Witness:

H. E. Barrett.

Inventor:

Dell S. Crosby

by: E. M. Hopkins

Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

D. S. CROSBY.

CHEESE MOLD.

APPLICATION FILED DEC. 14, 1917.

1,273,334.

Patented July 23, 1918.

2 SHEETS—SHEET 2.

Fig. IV.

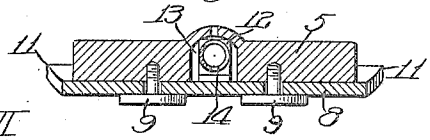


Fig. V.

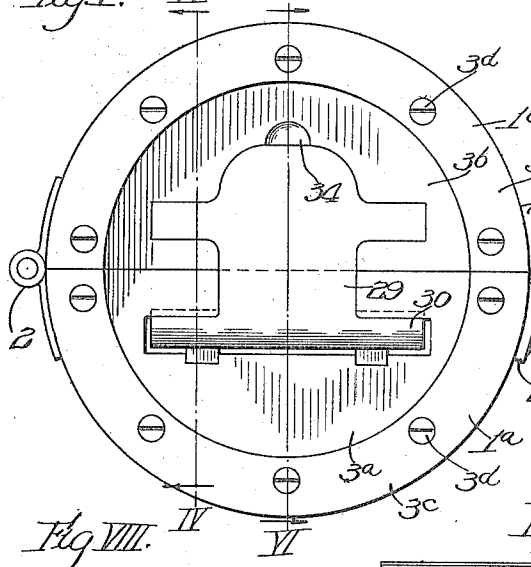


Fig. VI.

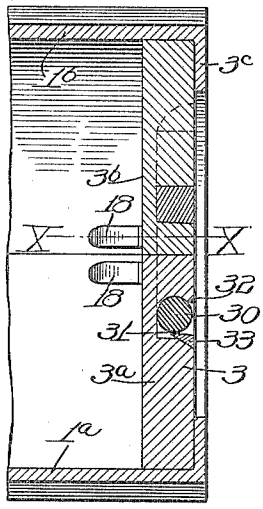


Fig. VIII.

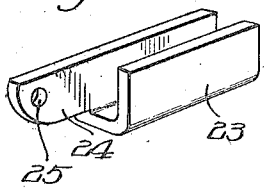


Fig. VII.

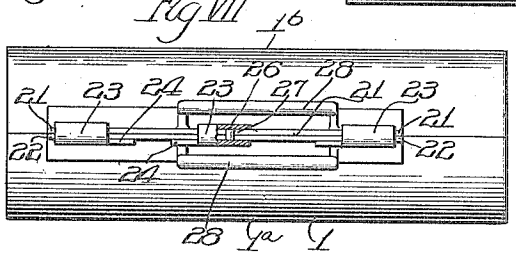


Fig. IX.

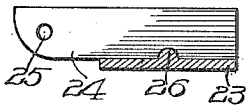


Fig. X.

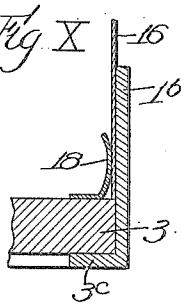
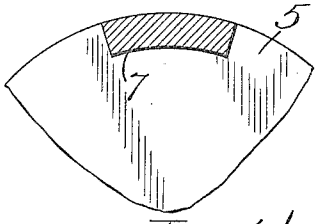


Fig. XI.



Witness:

H. E. Burnett

Inventor:

Dell S. Crosby

by: Z. M. Hopkins Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DELL S. CROSBY, OF CHICAGO, ILLINOIS.

CHEESE-MOLD.

1,273,334. Specification of Letters Patent. Patented July 23, 1918.

Application filed December 14, 1917. Serial No. 207,145.

To all whom it may concern:

Be it known that I, DELL S. CROSBY, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cheese-Molds, of which the following is a specification.

The present invention is an improvement upon the cheese-mold shown and described in my pending application filed October 18, 1917, Serial No. 197,253 and it relates more particularly to certain features in the construction of said mold all of which are hereinafter described in detail with reference to the accompanying drawings which are made a part of this specification and in which:—

Figure I is a view, on a small scale, partly in side elevation and partly in axial section, of a plurality of molds embodying the invention and arranged end to end in a gang or series.

Fig. II is an axial section, on a larger scale, of the adjacent ends of two adjacent molds of a gang or series, embodying the invention, the cutting plane being indicated by the line II—II, Fig. III.

Fig. III is a face view of the "follower," viewed in the direction of the arrow III, Fig. II, with some of the parts omitted and others shown in section on the plane of the inner face of the face-plate.

Fig. IV is a section on the line IV—IV, Figs. III and V, looking in the direction of the arrows.

Fig. V is an end elevation of the closed end of one of the hoops.

Fig. VI is a section thereof on the line VI—VI Fig. V looking in the direction of the arrows.

Fig. VII is a side elevation of one of the molds and one of the latches for securing the meeting edges of the mold-sections together.

Fig. VIII is a perspective view of one of the latches.

Fig. IX is a longitudinal section thereof.

Fig. X is a section on the line X—X Fig. VI.

Fig. XI is a section on the line XI—XI, Fig. II.

The main body portion of the mold, or the part that corresponds in function with what has heretofore been known in the art as the "hoop" is shown at 1. It is of true cylindrical shape throughout its length and is made up of two semicylindrical parts or sections 1^a and 1^b which are connected, at one side, by a hinge 2, which permits the hoop to be opened up longitudinally. The edges of the two sections of the hoop at a point diametrically opposite the hinge 2, come together in a butt joint and at this joint the two sections are provided with cooperating fastening devices by which their edges may be secured together to prevent their moving apart, and, thereby preventing the hoop from opening up, or they may be freed from each other to permit their being moved apart, and thereby permit the hoop to be opened up, at the will of the operator.

The hoop is normally closed at one end by a head 3 made up of two semicircular disks 3^a and 3^b which come together upon the diametrical line of separation of the section of the hoop 1. This head is made of metal of considerable strength and is firmly secured in place in the end of the hoop by inwardly extending flanges 3^c formed on the ends of the hoop-sections, and countersunk screws 3^d by which said flanges are secured to the section of the head.

The principal object of the present invention is to provide a follower 4 which is capable of radial expansion and contraction within the practical limits of a device of the class herein described. I am of course aware that however many rigid sectors a disk may be divided into, it is not radially extensible or expansible throughout but only in so far as the several adjacent sectors may move toward or away from each other and it is with this understanding that the terms "expansible" or "extensible" or their correlatives "contractible," etc., are hereinafter applied to the follower or a component part thereof.

The follower has a body portion which preferably is made up of two disks 5 and 6, connected together by struts 7, the disks and struts being preferably cast integrally. Some of these struts are adjacent to the peripheries of the disks and the outer faces of these struts and the peripheries of the disks are flush thereby producing a long piston-like effect.

The follower has a face plate which is radially contractible from its normal condition, and to this end the face plate is made

up of a plurality (four being shown in the drawings) of sections or sectors 8 which are secured to the body portion of the follower by screws 9. Preferably three screws are used for securing each sector to the body of the follower. These screws are tapped into the body and their stems pass through slots 10 formed through the sectors. The slots 10 are disposed parallel with radii of the common geometrical center of the face plate as a whole, so that the sectors are free to move relatively to the body portion and also relatively to each other, toward and from said common center. Preferably the heads of the screws are of sufficient diameter to close the slots 10 through which the stems of the screws pass.

Preferably, also, the edge of each sector 8 is offset as shown at 11 so that this offset portion will overlap the adjacent edge of the next adjacent section and thereby avoid the forming of an interspace between adjacent sectors.

Proceeding from the underneath face of each sector 8 is a lug or projector 12 which extends into a socket or cavity 13 formed in the body portion of the follower. These sockets or cavities are disposed radially with relation to the common center of the follower and in each of them is a coil spring 14 one end of which bears against the inner end of the socket or cavity and the other end of which bears against the lug or projection 12 with a constant tendency to force said lug or projection, and with it the sector which carries it, outward or away from the common center of the follower. Thus there is a constant tendency to "expand" the face plate.

Normally the circumference of the face plate, as a whole, is a trifle greater than the internal circumference of the sleeve 15 by which adjacent hoops are connected, end to end in the manner and for the purpose set forth in my application above referred to. This insures that when the follower is inserted into the sleeve it will contact therewith throughout its entire periphery.

To facilitate the entrance of the face plate of the follower into the end of the hoop which is of less diameter than the sleeve is the reason for making the face plate of the follower expansible and contractible, making its outer edge flare, and chamfering or beveling the end of the hoop so that it flares outward.

It is not material how the projections 12 are constructed or joined to the sectors of the face plate. Suffice it to say that they are carried by and project from it in positions to engage the expanding springs.

Before filling the hoop with the curd it is lined with a sheet 16, of some suitable fabric—say cotton sheeting. One margin of this lining is flush with the outer margin of one section of the hoop while the other margin of said lining extends beyond the margin of the other hoop section, so that the edges of the lining overlap as shown at 17. At the closed end of the hoop are clamping springs 18 secured to the semi-circular parts 3^a and 3^b respectively and bearing against the inner surfaces of the hoop-sections 1^a and 1^b near their outer margins. One end of the lining is clamped between these springs and the side walls of the hoop sections and at the other end of the hoop the lining is slipped into kerfs or saw cuts 19 and 20 with which the hoop sections 1^a and 1^b are respectively provided. The cut 19 is of just sufficient width to receive one thickness of the lining while the cut 20 is of sufficient width to receive the double thickness resulting from the initial doubling back of the overlapping margin 17. The object of these clamping springs and saw cuts is to hold the lining in place while the hoop sections are being closed together, after which the end of the lining is folded over the open end of the then closed hoop and the edge flap 17 at one edge of the lining spread out over the other edge.

The meeting edges of the hoop-sections, opposite the hinge 2 are secured together by fastening devices constructed as follows: 21 is an angle iron one flange of which is secured to one of the hoop-sections—say the section 1^b—and overlaps or breaks the joint formed by the meeting edges of the two hoop sections. 22 is an angle iron one flange of which is secured to this other hoop-section—say the section 1^a—and the other flanges of these two angle irons are radial with respect to the hoop and come together as shown most clearly in Fig. V. To one of these radial flanges—say the angle iron 21—is pivoted a U-shaped latch 23 one end of one side of which is extended as shown at 24 and this extension is pivoted at 25 to the radial flanges of one of the angle irons—say the iron 21. The latch 23 is provided with a rib or projection 26 which enters notch 27 in the edges of the radial flanges of the angle irons. To these angle irons are secured handles 28 by which the mold may be handled.

The two sections 3^a and 3^b of the head 3 are connected by an I-shaped latch 29 and the two sections 3^a and 3^b are recessed to receive this latch so that the surfaces of the several parts are flush. One of the cross arms 30 of the latch is cylindrical in cross section and the depression 31 in which it fits is undercut so as to provide an overhanging lip 32 which projects beyond the diametrical center of the cross arm 30 and provides a cylindrical bearing therefor. The depression 31 must of course be of slightly greater diameter than the cross arm 30, and this will leave a space between said cross arm 30, and the outer wall of the re-

cess 31 when the arm 30 comes to its bearing and this space is bridged by shims 33 which are permanently secured to the section 3^a. At the opposite end of the latch the section 3^b is provided with a notch 34 for receiving an implement such as a nail or screw driver by which the free end of the latch may be pried up.

What I claim as new is:—

1. A cheese mold having, in combination, a hoop and a follower, said follower having a plurality of sector-shaped sections movable toward and from their common geometrical center and together forming a complete disk, means to which said sections are attached so as to be movable as aforesaid, and yielding means for normally forcing said sections away from said center.

2. A cheese mold having, in combination, a hoop and a follower, said follower having a body-portion and a circular face plate formed in a plurality of sector-shaped sections, movable toward and from the geometrical center of the face plate, as a whole, and together forming a complete disk of normally larger diameter than the interior of the main portion of the hoop, and means connecting the sections of the face plate with said body-portion so that said sections may move toward and from their common geometrical center, the outer edges of said sections being flared or chamfered so that when forced into the hoop the sector-shaped sections will be forced toward said center.

3. A cheese mold having, in combination, a hoop and a follower, said follower having a body-portion, and a circular face plate formed in a plurality of sections movable toward and from the geometrical center of said plate as a whole, means connecting the face plate sections and body-portion whereby said face plate sections may move relatively to the body-portion and to each other, toward and from their common geometrical center, and yielding means for normally forcing said face-plate-sections away from said center.

4. A cheese mold having, in combination, a hoop and a follower, said follower having a body portion and a circular face plate formed in a plurality of sections each having through it a plurality of slots that are parallel with the radius of the section through which they are formed, and screws passing through said slots and engaging the body-portion, said screws having heads that engage the sections of the face plate.

5. A cheese mold having, in combination, a hoop and a follower, said follower having a body-portion and a circular face plate formed in a plurality of sections having through them, respectively, slots that are parallel with radii of the plate as a whole, and screws passing through said slots and engaging the body-portion said screws having heads that engage the face plate sections and are of sufficient diameter to cover said slots.

6. A cheese mold having, in combination, a hoop and a follower, said follower having a body-portion, and a circular face plate formed in a plurality of sections movable toward and from the geometrical center of the face plate, as a whole, and springs constantly exerting upon said sections pressure tending to move them away from said center.

7. A cheese mold having, in combination, a hoop and a follower, said follower having a body-portion and a circular face plate formed in a plurality of sections movable toward and from the geometrical center of the face plate as a whole and springs constantly exerting upon said sections pressure tending to move them away from said center, the periphery of the face plate being flared or chamfered.

8. A cheese mold having, in combination, a hoop and a follower, said follower having a body-portion and a face plate made up of sector-shaped sections of sheet metal, each offset at one of its edges overlapping the adjacent flat edge of the next adjacent section, and means slidably connecting each section of the face plate to the body-portion so that said sections may move toward and from a common center.

9. A cheese mold having, in combination, a hoop and a follower, said follower having a body-portion comprising two circular disks and struts connecting said disks, a radially expansible face plate of larger diameter than said disks and means securing said face plate to one of said disks.

10. A cheese mold having in combination a hoop and a follower, said follower having a body-portion comprising two parallel circular disks and struts connecting them at their outer edges, the outer surface of the struts being flush with the peripheries of the disks, a radially expansible face plate and means connecting said face plate with one of said disks.

11. A cheese mold having, in combination a hoop and a follower said follower having a body-portion comprising two parallel circular disks and struts connecting them, a face plate and means connecting said face plate with one of said disks.

12. A cheese mold having, in combination, a hoop and a follower, said follower having two parallel disks, struts connecting them, a radially expansible face plate, and means connecting said face plate with one of said disks, the other of said disks being flared or chamfered.

13. A cheese mold having, in combination, a hoop and a follower, said follower having a body-portion and a circular face plate made up of a plurality of segmental sec-

tions, means slidably connecting the segments of the face plate to said body-portion so that they are capable of movement relatively thereto and relatively to each other, toward and from a common center, sockets in said body-portion disposed radially relatively to said common center, springs in said sockets, and projections carried by the segments of the face plate and engaging the outer ends of the springs.

14. A cheese mold having, in combination, a hoop and a follower said follower having a body-portion comprising two parallel disks and struts connecting them, a segmental face plate, and means connecting the segments of face plate with one of said disks, the disk last aforesaid having radially disposed sockets or cavities, and springs located in said sockets or cavities, the segmental sections of the face plate having projections extending into said sockets and engaging the outer ends of said springs.

15. A cheese mold having, in combination, a hoop formed in two longitudinal sections, a hinge connecting the edges of said sections at one side of the hoop, a fastening device connecting the edges of said sections at the side of the hoop opposite said hinge, said fastening device consisting of radial flanges extending outward from the hoop sections and a U-shaped latch pivotally connected to one of said flanges and adapted to straddle and embrace both of them.

16. A cheese mold having, in combination a hoop formed of two longitudinal sections, a hinge connecting the edges of said sections at one side of the hoop, and a fastening device connecting the edges of said sections at the side of the hoop opposite said hinge said fastening device consisting of radial flanges extending outward from the hoop sections and a U-shaped latch pivotally connected to one of said flanges and adapted to straddle and embrace both of them, said flanges having notches and said latch having a part adapted to enter said notches for preventing the relative longitudinal movement of said flanges.

17. A cheese mold having a hoop formed in two longitudinal sections said hoop having at one end a head made of two semicircular disks meeting upon the diametrical line of separation of the hoop sections, and means for connecting said semicircular disk-sections together said connecting means consisting of a substantially I-shaped latch the stem of which crosses the meeting edges of said semicircular disks and said semicircular disks being recessed to receive said latch.

18. A cheese mold having a hoop formed in two longitudinal sections said hoop having at one end a head made of two semicircular disks meeting upon the diametrical line of separation of the hoop sections and means for connecting said semicircular disks together, said connecting means consisting of a substantially I-shaped latch the stem of which crosses the meeting edges of said semicircular disks and said semicircular disks being recessed to receive said latch, the lateral branch or cross arm at one end of the stem of said I-shaped latch being rounded and the recess in which it fits being undercut to form a complementary bearing therefor.

19. A cheese mold having a hoop formed in two longitudinal sections a two part head closing said hoop at one end, clamping springs, one secured to each of the two parts of the head, adjacent to the edge of the corresponding hoop-section, the opposite end of each of said hoop sections being provided with a slit, or saw-cut.

DELL S. CROSBY.

Witnesses:
L. M. HOPKINS,
IDA H. TODD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."